

Triangular Insert Ø18 Z3

A08-200

All Metallinserts with simple profiles based on flats and concave radii can be ground using an inclined large 1A1 wheel. The grinding principle allows to use wheeldiameters up to 300 mm, which leads to low wear. In addition with a simple dressing operation - x- oscillation - the SIRIUS HPM can operate over huge batches of inserts without any intervention by the operator. The chipbreaker operations are subdivided in a roughing and finishing operation using standard wheels. The chipbreakerprofile is interpolated, in some cases the wheeldiameter might not be large enough to obtain a straight bottom line of the chipbreaker. In such cases the operations can be subdivided into facettes.

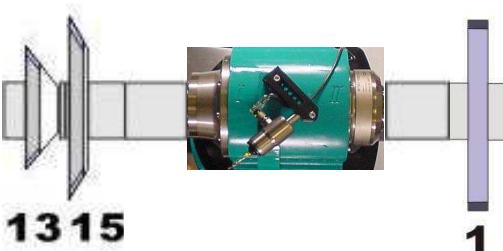
1. Cycletime for Production

Tool specifications				
Diameter 18 mm, Cutting edges 3, Thickness 4 mm Material HM				
Operations	Probe	Chipbr. rou.	Chipbr. fin.	O.D.
Feed [mm/Min]	2000	80	90	300
Power [kW]		4	2	1
Cutting feed [m/s]		22	26	24
Used wheels		15	13	1
Grinding time [s]	3	49	40	163
Total cycle time	4 Min 14			

The mentioned cycle times are indicative. The material to be ground, different arindina wheels or other coolants can influence the cycle times considerably.

2. Used Grinding Wheels

15 Ø125 1V1 D64
13 Ø100 12V9 D16
1 Ø300 1A1 D35



3. Machine and Software Requirements

Machines: 5 axes CNC grinders : SIRIUS HPM
Control: Fanuc 160i
Coolant: Synthetic Oil, pressure 6 - 7 bar
Software: Quinto 4.2, DXQ

responsible engineer: OP, 26.2.07

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